UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

TOMITA TECHNOLOGIES USA, LLC; TOMITA TECHNOLOGIES INTERNATIONAL, INC.

Plaintiffs,

-v-

NINTENDO CO., LTD.; NINTENDO OF AMERICA INC.,

Defendants.

11-cv-4256(JSR)

FINDINGS OF FACT AND CONCLUSIONS OF LAW

JED S. RAKOFF, U.S.D.J.

3D images have a storied history on the big screen, but they now also appear on the small screens of handheld entertainment devices. Nintendo Co., Ltd. and Nintendo of America Inc. (collectively, "Nintendo") produce one such device, a pocket gaming console called the Nintendo 3DS (the "3DS"). Two 3DS applications, its camera application and its augmented reality game card application, allow users to capture and display stereoscopic, or 3D, images. Tomita Technologies USA, LLC and Tomita Technologies International (collectively, "Tomita") claim that these applications infringe on Claim 1 of U.S. Patent No. 7,417,664 (the "'664 patent"). Following a jury trial where Tomita prevailed on infringement and validity of the '664 patent, the Federal Circuit reversed this Court's construction of the patent's "offset presetting means" limitation and announced its own. See Tomita Techs., USA, LLC v. Nintendo Co., Ltd., 594 Fed. Appx. 657, 659-63 (Fed. Cir. 2014) (Tomita II); Tomita Technologies, USA, LLC v. Nintendo Co., Ltd., 855 F. Supp. 2d 33, 42-43 (S.D.N.Y. 2012) (Tomita I). After additional discovery and motion practice, this Court held a bench trial to determine whether the 3DS infringes under the

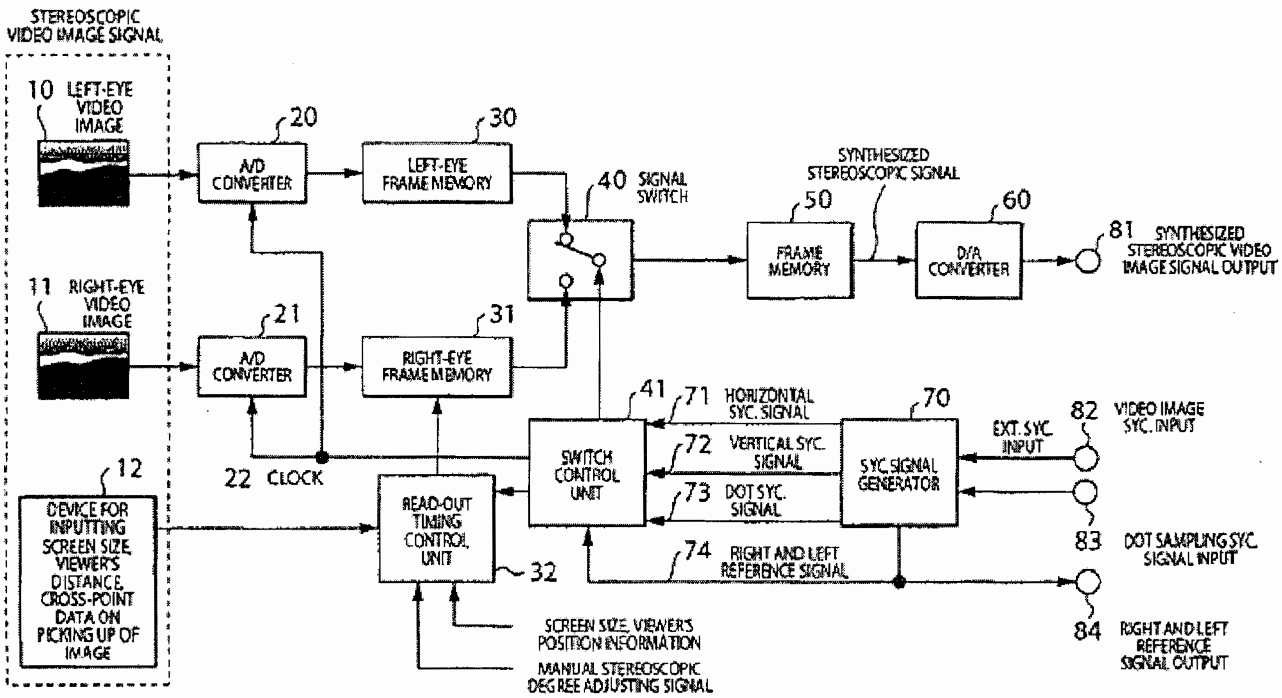
Federal Circuit's construction. After carefully reviewing the materials from trial, including testimony of expert witnesses on each side, the Court concludes that it does not. Based on the findings of fact and conclusions of law set forth below, Tomita's claims are hereby dismissed.

3D images are a trick, an illusion. And while a good magician never reveals her tricks, the Court must explain this one in detail. See also Tomita I at 35 (revealing the trick behind 3D glasses). Although not, in fact, three-dimensional, 3D images create a perception of depth in the mind's eye. They create this perception by delivering two slightly different images to a viewer's right and left eyes. One typical way to deliver separate images to separate eyes is to overlap left- and right-eye images. But the images should not be overlapped completely, such that they are stacked directly on top of one another. Instead, one or both images must be shifted along their common horizontal axis, creating an offset. How much the images are shifted relative to each other will alter the viewer's perception of depth, known as the viewer's "stereoscopic feelings." Shifting the images just the right amount will create optimal stereoscopic feelings.

The invention described in the '664 patent aims to create optimal stereoscopic feelings. It does so by capturing two video images, a "left-video" image and a "right-video" image, as well as cross-point data that allows it to calculate the perfect offset between the images. It applies the offset as it weaves the images

together before storing and displaying them. In particular, Claim 1 of the '664 patent contains the following limitation: "offset presetting means for offsetting and displaying said video images based upon said video image information, said cross-point information and information on the size of the image which is displayed by said stereoscopic video image display device." '664 Patent, 21:61-65. As a means-plus-function element under 35 U.S.C. § 112(f), the "offset presetting means" has two aspects: its function and a corresponding structure. This Court identified its function as "offsetting and displaying said different video images based upon said video image information, said cross-point information and information on the size of the image which is displayed by said stereoscopic video image display device." Tomita I at 42. The Court then held that the '664 patent described various embodiments of the structure corresponding to this function. Id. The Federal Circuit reversed this construction, finding only a single corresponding structure for "offset presetting means," depicted in Fig. 3 of the '664 patent:

FIG.3



The Federal Circuit identified the corresponding structure of the offset presetting means as "timing control unit 32, signal switch 40, switch control unit 41, and synthesis frame memory 50 described in Figure 3 and column 9 line 44 to column 10 line 29 and equivalents thereof." Tomita II at 663. The Federal Circuit split the components into two groups. Timing control unit 32 performs the "'offsetting' portion of the claim function," while "the 'displaying' portion of the claim function is performed by 'the switch control unit 41 preset[ting] the timing of switching of the signal switch 40 for writing of video data into synthesis frame memory 50.'" Id. at 663 (quoting '664 patent at col. 10 ll. 26-29) (alteration in original).

Based on the descriptions in the patent, the components comprising the corresponding structure must include the components' inputs and outputs. See '664 patent at cols. 9-10 ll. 44-29. Otherwise, the components would "just float in the air, so there wouldn't be any functionality." Tr. 306:24-307:4.

So how do these components accomplish the 3D image trick? To make a single, stereoscopic image, the components must weave together the left- and right-eye image pixel data input to signal switch 40. Tr. 373:12-15. Signal switch 40 does not alter the pixel data that it receives; instead, it simply writes the data into frame memory 50. Tr. 50:19-23; Tr. 72:14-16; Tr. 315:4-22. However, controlled by switch control unit 41, signal switch 40 alternates the lines of pixel data it writes into frame memory 50, Tr. 372:22-373:2; Tr. 374:4-5, so that if one line comes from the left-eye frame memory, the next line will come from the right-eye frame memory. Tr 50: 16-23. In this way, signal switch 40, switch control unit 41, and their inputs produce an interleaved stereoscopic image stored in frame memory 50.

Read-out timing control unit 32 adds a twist, the offset, to this straightforward process of interweaving. Read-out timing control unit 32 calculates the desired amount of offset based on cross-point information and screen-size information. Tr. 71:11-14; Tr. 310:16-24; 337:15-338:2. It also receives the timing signal for signal switch 40 as an input. Id.; Tr. 310:16-18. Based on the desired offset and the timing signal for signal switch 40, read-out timing control unit 32 generates a clock signal, which adjusts the input of the right-eye

image data into signal switch 40. Tr. 310:19-311:23. Specifically, the clock signal causes the right-eye image data to be advanced or delayed relative to the left-eye image data when it flows through signal switch 40. Tr. 309:11-13. Thus, instead of transferring alternating rows of pixel data that line up into a neat stack, signal switch 40 transfers right-eye pixel data rows that are horizontally offset from the left-eye rows, delayed or advanced by some number of pixels. Tr. 311:11-20. This difference in the relative timing of when the left- and right-eye pixel data are written into frame memory 50 creates the desired stereoscopic feelings. Tr. 106:11-14; Tr. 309:7-13.

The 3DS also accomplishes the 3D image trick by offsetting left- and right-eye images. First, the 3DS uses its two cameras, which are of typical quality for a mobile device, to capture left- and right-eye images. Tr. 320:2-10. The images are initially stored in the 3DS's main memory. Tr. 320:11-16. The 3DS's central processing unit ("CPU") then calculates a transformation matrix for each image, based on the desired offset value. Tr. 322:15-21. The 3DS's graphics processing unit ("GPU") applies these transformation matrices to the left- and right-eye images. Tr. 323:11-324:7. Specifically, a graphics software library called OpenGL interfaces with the GPU and hands it the original image and the transformation matrix. Id.; Tr. 169:18-25. The GPU transforms the original image into a new, offset image according to the parameters of the matrix. Id. The new, offset image is then deposited into a render buffer before being moved to a left or right display buffer. Tr. 350:25-351:3.

The process of transforming an old image into a new image is known as "rendering." Tr. 324:9-11. It is possible to render a digital image using a matrix because a digital image is made up of a quantity of pixels, each of which can be associated with an X and Y coordinate based on its location in the image. Tr. 110:17-112:2. Some kinds of matrices take an original set of coordinates, X and Y, and map them to a new set of coordinates, X´ and Y´, effectively moving a pixel from one location in an image to another. Tr. 76:20-77:2; Tr. 327:18-21; Tr. 349:15-25. Some of these matrices can be classified as "affine transformation matrices," which means that any pixels located on a line before the transformation will still be on a line together after the transformation. Tr. 76:20-77:2. The lengths and angles between lines may not be preserved, however. PX 508 at 207. For example, matrices that accomplish translations (shifting an image in some direction), rotations (spinning an image around), or scalings (making an image larger or smaller) are all affine transformation matrices. Id.; Tr. 76:20-77:2; Tr. 327:12-17. The matrices calculated by the 3DS's CPU and handed off to its GPU by OpenGL are affine transformation matrices. Tr. 322:15-21; Tr. 323:11-324:7. The relative timing offsets effected by the '664 patent could also be accomplished using an affine transformation matrix: a horizontal translation that shifts each pixel in an image to the left or right by a set amount is a simple example of an affine transformation. Tr. 119:20-25; Tr. 327:22-328:3.

Once the rendered, offset images are deposited in the left and right display buffers, they still must be interwoven to create a single, stereoscopic image. In the 3DS, interleaving is accomplished by a liquid crystal display ("LCD") controller, which interfaces between the CPU and GPU and the 3DS's LCD screen. Tr. 53:12-54:12; 362:23-25. Specifically, one part of the LCD controller, the data request control unit, requests "chunks" of 30 to 40 pixels at a time from a display buffer. Tr. 364:4-19; 366:23-367:5. A different part of the LCD controller, the register configuration, contains registers holding parameters that configure the operation of the data request control unit. Tr. 236:13-19. When the relevant parameter there, PDC_MODE_0, is set to value two, or stereoscopic display mode, the data request control unit alternates between display buffers when requesting data, such that it will request the first line of one buffer, one chunk of data at a time, and then request a line from the other display buffer, also one chunk at a time. Tr. 65:21-66:3; Tr. 174:1-175:16; Tr. 236:17-22; Tr. 246:16-247:8.

The data request control unit gives the image data to an ansychronous first-in/first-out cue ("Async FIFO"). Tr. 367:15-19. An Async FIFO is a memory module that is used in many electronic systems with multiple clock systems. Tr. 64:6-24. In the 3DS, it bridges the core clock system with the video clock system, so that the stereoscopic image will display properly on the 3DS's screen. Id.; Tr. 381:14-17. The 3DS's Async FIFO is not big enough to hold an entire stereoscopic image by itself. Tr. 381:23-25. Instead, the data out

unit takes the data from the Async FIFO and displays it on the 3DS's upper LCD screen. Tr. 63:25-64:5.

Against this background of how the 3DS creates its three dimensional illusion, the Court turns to the question of whether the 3DS's performance of the illusion is so similar to the '664 patent as to infringe it. Tomita claims that the 3DS infringes the '664 patent literally or under the doctrine of equivalents. In this case, however, both literal infringement and infringement under the doctrine of equivalents reduce to essentially identical inquiries.

"Literal infringement of a means-plus-function limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification." Gen. Protecht Grp., Inc. v. Int'l Trade Comm'n, 619 F.3d 1303, 1312 (Fed. Cir. 2010); see Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999) ("Functional identity and either structural identity or equivalence are both necessary."). Tomita has already satisfied the functional identity half of this formulation. This Court upheld the jury's verdict of infringement, and the parties agree that the Federal Circuit did not modify the function of the "offset presetting means" limitation on appeal. See Joint Proposed Pretrial Consent Order at 3, ECF No. 247. Neither party argues that the structures of the 3DS and '664 patent are identical. Therefore, to satisfy the second half of the literal infringement test, Tomita must show structural equivalence.

The Supreme Court has described the test for structural equivalence in the means-plus-function context as "an application of the doctrine of equivalents in a restrictive role." Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 28 (1997); see Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1379 (Fed. Cir. 2000) ("The tests for equivalence under § 112[(f)] and the doctrine of equivalents are closely related, and involve similar analyses of insubstantiality of differences.") (internal quotation marks omitted). Accordingly, Tomita's claims of literal infringement and infringement under the doctrine of equivalents both turn on whether the 3DS's structure is "equivalent," in either the means-plus-function sense or the doctrine of equivalents sense, to the structure corresponding to the offset presetting means. See Order dated May 28, 2015, at 1-2, ECF No. 234.

The Federal Circuit "applies two articulations of the test for equivalence," the function-way-result test and the insubstantial differences test. Voda v. Cordis Corp., 536 F.3d 1311, 1326 (Fed. Cir. 2008). Tomita bears the burden of satisfying one of these tests, in either its means-plus-function form or its doctrine of equivalents form, by a preponderance of the evidence. Centricut, LLC v. Esab Group, Inc., 390 F.3d 1361, 1367 (Fed. Cir. 2004). The Court considers whether Tomita has borne its burden for each test in turn, starting with the function-way-result test.

As a threshold matter, Tomita argues that the function-way-result test should not apply here. See Plaintiffs' Proposed Findings

of Fact and Conclusions of Law in Connection with Post-Trial Written Summation (Corrected), ¶ 152, ECF No. 252. It is true that the Supreme Court has recognized that the function-way-result test "often provides a poor framework for analyzing [non-mechanical] products or processes." Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 39-40 (1997). However, the Supreme Court has never disqualified the function-way-result test from any particular set of cases and went on in Warner-Jenkinson to entrust the Federal Circuit with the "refinement" of specific tests for equivalence. Id. The Federal Circuit has applied the function-way-result test to patents covering electronic products and processes similar to the '644 patent. See, e.g., Brilliant Instruments, Inc. v. GuideTech, LLC, 707 F.3d 1342 (Fed. Cir. 2013); Energy Transp. Group, Inc. v. William Demant Holding A/S, 697 F.3d 1342 (Fed. Cir. 2012). Accordingly, the Court does consider the function-way-result test here.

For present purposes, the means-plus-function version of the function-way-result test is essentially identical to the doctrine of equivalents version. The Federal Circuit has explained that "[a] key feature that distinguishes 'equivalents' [in the means-plus-function context] and 'equivalents' under the doctrine of equivalents is that [means-plus-function] equivalents must perform the identical function of the disclosed structure, while equivalents under the doctrine of equivalents need only perform a substantially similar function." Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1364 (Fed. Cir. 2000) (citations omitted); see Odetics, Inc. v. Storage

Technology Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). In this case, functional identity has already been established, and the Court only needs to consider the way and result prongs of the test. "Because the 'way' and 'result' prongs are the same under both the [means-plus-function] and doctrine of equivalents tests, a structure failing the [means-plus-function] test under either or both prongs must fail the doctrine of equivalents test for the same reason(s)." Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1364 (Fed. Cir. 2000).

The Court concludes that Tomita fails both the way and result prongs of the test. In applying each prong, the Court asks whether the way that the 3DS performs the offsetting and displaying function or the result thereof is "substantially different" from the way or result of the '664 patent. Odetics, 185 F.3d at 1267. Tomita must show that any differences between the ways and results of the 3DS and the '664 patent are insubstantial. Id. Tomita fails the way prong of the test because there are substantial differences between using matrix transformations in software to adjust left- and right-eye images and using relative timing in hardware to offset only a right-eye image. Tr. 351:8-352:4. The Court acknowledges that individual differences, such as using software versus hardware, might not be sufficiently substantial on their own. See Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 1383 (Fed. Cir. 2001) (observing that hardware and software implementations can be equivalent despite "ancillary changes in affected circuitry and packaging") (citing

Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1269-70 (Fed. Cir. 1999)). However, taken together, these differences show that the 3DS and the '664 patent go about offsetting and displaying in substantially different ways.

Specifically, the differences combine to allow the 3DS to operate more flexibly and to accomplish multiple adjustments at once. First, matrix transformations can effect multiple adjustments to an image simultaneously - for instance, vertical translations as well as horizontal translations - while the '664 relative timing offset is limited to effecting horizontal translations. Tr. 327:15-17. Second, implementing adjustments in software rather than hardware provides more flexibility, because software can be updated and the GPU performs other functions related to gaming. Tr. 353:10-17. Third, rendering both images allows for camera calibration to correct camera misalignment. Tr. 324:14-21; 352:13-21. Collectively, these amount to substantial differences.

The Court also finds at least one individual difference that is substantial on its own. The '664 patent accomplishes a single horizontal translation through relative timing, offsetting the right-image by a single value. In mathematical terms, this amounts to adding a single number to the horizontal coordinate of a pixel, so X', the new horizontal coordinate, will equal X (the old horizontal coordinate) plus t (the offset value). But the effect on the horizontal coordinate of a given pixel transformed by a matrix in the 3DS cannot be reduced to the addition of single value. Instead, the

3DS's transformation matrices also accomplish rotations and scalings, which will affect the horizontal coordinates of pixels. Tr. 350:8-22. X' in the 3DS cannot be expressed simply as X plus t, but will instead depend on the position of the pixel in the original image and other factors, such as the amount of rotation. Thus, focusing only on their effects on horizontal coordinates, the '664 patent's relative timing offsets and the 3DS's transformation matrices operate in substantially different ways.

The results of the '664 patent's corresponding structure to the offset presetting means and the allegedly substitute structure in the 3DS are also substantially different. The result of the structure in the '664 patent is pixel data stored in frame memory 50 whereas the 3DS result is an image displayed on an LCD screen. The Court takes expert witness Favalora's point that LCD screens can be "read." (Indeed, the Court is "reading" from one now as it writes this opinion.) Tr. 146:13-15. However, pixel data is not readable and viewable to the naked human eye, whereas an image on an LCD screen is. Put another way, one of ordinary skill in the art would not recognize an LCD display as a memory. Tr. 382:15-25. Moreover, the '664 patent creates and stores a single, stereoscopic image, before displaying it, by writing alternating lines of pixels into frame memory 50. Tr. 138:17-19.

The 3DS does not create a single image before displaying it. Tr. 380:13-14. Instead, the data request control unit reads from the left and right image buffers and passes batches of data, each

consisting of less than a full line of pixels, to the Async FIFO, which is not large enough to hold an entire stereoscopic image. Tr. 136:19-21; Tr. 364:4-19. The data out unit then takes data from the Async FIFO and displays it on the 3DS's upper LCD screen. Tr. 63:25-64:5. Thus, the 3DS's stereoscopic image is not composed as a unified whole until it is displayed on the LCD screen. Both of these differences in result are substantial. Accordingly, Tomita has failed both the way and result prongs of the function-way-result test and has not proved infringement in this manner.

Tomita also fails the insubstantial differences test. "Under the insubstantial differences test, '[a]n element in the accused device is equivalent to a claim limitation if the only differences between the two are insubstantial.'" Voda v. Cordis Corp., 536 F.3d 1311, 1326 (Fed. Cir. 2008) (quoting Honeywell Int'l Inc. v. Hamilton Sundstrand Co., 370 F.3d 1131, 1139 (Fed. Cir. 2004)). The Federal Circuit has not been as clear about the precise differences between equivalence in the means-plus-function context and under the doctrine of equivalents when applying the insubstantial differences test as opposed to the function-way-result test. It is clear that "their tests for equivalence are closely related, involving similar analyses of insubstantiality of differences." Odetics, 185 F.3d at 1267 (Fed. Cir. 1999) (citation and internal quotation marks omitted). However, "the [means-plus-function] statutory equivalence analysis, while rooted in similar concepts of insubstantial differences as its doctrine of equivalents counterpart, is narrower. This is because, under [means-

plus-function] equivalence, functional identity is required." Id. (citation omitted). As noted above, functional identity has already been established here. Accordingly, the Court concludes that, as with the function-way-result test, application of the insubstantial differences test is essentially the same for purposes of mean-plus-function equivalence and under the doctrine of equivalents in this case. Moreover, because the Court concludes that Tomita has failed the doctrine-of-equivalents version of the insubstantial differences test and the means-plus-function version is "narrower," any discrepancies between the two would not change the ultimate result. Id.

The differences between the '664 patent and the 3DS discussed above are also relevant to the insubstantial differences inquiry. In particular, to prevail in spite of such differences, Tomita must show that, "from the perspective of one of ordinary skill in the art, [they] add[ed] nothing of significance to" the corresponding structure of the offset presetting means in the '664 patent. Valmont Indus., Inc. v. Reinke Mfg. Co., Inc., 983 F.2d 1039, 1043-44 (Fed. Cir. 1993). Known interchangeability is an important, although not dispositive, factor in this showing. See Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609 (1950); Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309-10 (Fed. Cir. 1998).

Tomita has failed to show by a preponderance of the evidence that those of ordinary skill in the art would see the differences between the 3DS and the '664 patent as adding nothing of significance.

The Court does find that using relative timing and using matrix transformations to accomplish image offsets were both known to the art prior to the issuance of the '664 patent. Tr. 85:7-13; Tr. 88:20-89:3; Tr. 428:9-23; PX 502 at 10:62-11:11, 11:61-12:2, 12:23-35 (1998 patent describing use of timing offsets); PX 503 at 11:14-22 (same); PX 507 at 31-36 (OpenGL specifications describing matrix transformations); PX 508 at 207 (computer graphics manual describing matrix transformations). However, these techniques are not interchangeable for purposes of an insubstantial differences analysis simply because they were both known to accomplish horizontal translations used to create stereoscopic images. Known interchangeability must not be collapsed into a functional identity test; instead, if two structures known to perform the same function accomplish it significantly differently, they are not interchangeable. See Chiuminatta, 145 F.3d at 1309, 1311 (Fed. Cir. 1998) ("The question of known interchangeability is not whether both structures serve the same function, but whether it was known that one structure was an equivalent of another.")(conducting similar interchangeability analysis in context of means-plus-function and doctrine of equivalents inquiries); see also Toro Co. v. Deere & Co., 355 F.3d 1313, 1324 (Fed. Cir. 2004) ("[Plaintiff] highlights certain statements (e.g., from its expert witnesses) that [two systems] can be used interchangeably, but this goes to the function or result of these systems, and begs the issue of the way in which [the systems] actually work.").

In this case, notwithstanding their common task of shifting images horizontally, the '664 patent's offsetting and displaying structures and the 3DS's analogous structures are not interchangeable or equivalent because a person of ordinary skill in the art would recognize significant differences between them. Tr. 348:5-25; Tr. 351:9-352:4; Tr. 355:1-8; Tr. 359:14-21; Tr. 385:14-387:25. In particular, with respect to the offsetting structures, the hardware-based timing mechanism of the '664 patent cannot provide the same functionality as the more flexible software-based transformation matrices in the 3DS, which can effect other affine transformations in addition to translations and can effect multiple such transformations at once. Tr. 327:12-17; Tr. 348:22-25. Moreover, the 3DS uses matrix transformations to render new left and right images, effectively changing the location of all the images' pixels along two axes, whereas the '664 patent only offsets a single image along a single axis. Tr. 351:9-24; Tr. 352:13-16, Tr. 356:4-17. A person of ordinary skill in the art would consider these differences to add something of significance to the '664 patent's offsetting structure, including because they allow the 3DS to correct for camera calibration. Id.

A person of ordinary skill in the art would also see significant differences between the '664 patent's displaying structures and the analogous structures in the 3DS. In the '664 patent, frame memory 50 holds a complete interleaved stereoscopic image. Tr. 138:17-19; Tr. 387:5-14. However, to display the image to a human eye - which, after all, is necessary to induce any stereoscopic

feelings - frame memory 50 must still pass the image to D/A converter 60 which "converts the digitalized video signal into analog signal for outputting it as a synthesized stereoscopic signal," which then goes to an LCD display. '664 patent at col. 10 ll. 43-45; see Tr. 378:16-379:1. However, D/A converter 60 is not part of the structure corresponding to the offset presetting means. Tomita II at 663. As such, the structure at issue in the '664 patent does not display a stereoscopic image on an LCD screen and only holds it in memory. By contrast, the 3DS does not store an interleaved stereoscopic image in memory. Tr. 380:13-14. Instead, it only composes the stereoscopic image as a whole as it displays it on its upper LCD screen. Tr. 63:25-64:5. From the perspective of one of ordinary skill in the art, only composing the stereoscopic image as it is displayed by the LCD adds something of significance to the '664 patent's storage of an image in memory. Tr. 382:15-383:5.[1]

This addition has further practical significance because it reduces the latency, or wait time, of the display of the stereoscopic image: with the '664 patent, you must fill up frame memory 50 before any display can occur, whereas with the 3DS the data goes directly to the display. Tr. 387:5-14. This can result in a more interactive experience for a user of a hand-held gaming device. Id. Because of the

[1] The Court is mindful that component-by-component analysis is "impermissible." Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1380 (Fed. Cir. 2000); see Odetics, 185 F.3d at 1268. The key point is not that frame memory 50 finds no exact counterpart in the 3DS. Instead, considering the full context of the invention, the key point is that the '664 patent holds an entire, interleaved stereoscopic image in memory, while the 3DS does not and outputs an image visible to the

significant differences between the structure corresponding to the offset presetting means in the '664 patent and the 3DS, Tomita fails the substantial difference test.

Since Tomita fails both the function-way-result and substantial differences tests, it has failed to show that the 3DS infringes on the '664 patent under a means-plus-function structural equivalence theory or under the doctrine of equivalents. Accordingly, plaintiffs' claim must be dismissed. Concomitantly, Nintendo prevails on its counterclaim for declaratory judgment that the 3DS does not infringe the '664 patent.

The Court also considers Nintendo's request for attorneys' fees under 35 U.S.C. § 285. To determine whether to award fees under § 285, a court first asks whether the case is exceptional and second asks whether an award is appropriate. See Forest Labs., Inc. v. Abbott Labs., 339 F.3d 1324, 1327-28 (Fed. Cir. 2003).

> Exceptional cases usually feature some material, inappropriate conduct related to the matter in litigation, such as willful infringement, fraud or inequitable conduct in procuring the patent, misconduct during litigation, vexatious or unjustified litigation, conduct that violates Federal Rule of Civil Procedure 11, or like infractions. Absent misconduct in the litigation or in securing the patent, a trial court may only sanction the patentee if both the litigation is brought in subjective bad faith and the litigation is objectively baseless.

Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp., 459 F.3d 1311, 1321-22 (Fed. Cir. 2006) (citations omitted). This case is not exceptional. Neither party has engaged in inappropriate conduct, and the litigation was neither brought in bad faith nor was it objectively

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human eye.

baseless. As such, the Court denies Nintendo's request for attorneys' fees under § 285.

The Clerk is directed to enter final judgment dismissing plaintiff's claim and declaring that the 3DS does not infringe on Claim 1 of the '664 patent.

SO ORDERED.

Dated: New York, New York
April 24, 2016

JED S. RAKOFF, U.S.D.J.